CLAIMS

1. A process for producing an episesamin-rich composition having episesamin at a concentration greater than 50 wt%, comprising the steps of:

applying epimerization to sesamin or a sesamin-containing composition so that at least part of the sesamin is converted to episesamin; and

selectively crystallizing episesamin by recrystallization.

2. The process according to claim 1, wherein the episesamin-rich composition is precipitated crystal and contains episesamin at a concentration 60 wt% and upward.

3. The process according to claim 1 or 2, wherein the episesamin-rich composition is 70 wt% and upward.

4. The process according to any one of claims 1-3, which further includes the step of dissolving the sesamin or sesamin-containing composition in an oil or fat under heating either prior to or after epimerization, thereby preparing a solution.

5. The process according to claim 4, wherein the oil or fat is at least one member selected from among MCT (middle-chain fatty acid triglyceride), diacyl glycerol, sesame salad oil, olive oil, soybean oil, rapeseed oil, corn oil, rice germ oil, and sunflower seed oil.

6. The process according to claim 4 , wherein the oil or fat is MCT (middle-chain fatty acid triglyceride).

7. The process according to any one of claims 1-6, wherein the epimerization is an acidic catalyst treatment.

8. The process according to claim 7, wherein the acidic catalyst treatment consists of making contact with activated clay or acid clay.

9. The process according to claim 8, wherein the activated clay or acid clay is one that has been adjusted to have a pH of 3.7 or less in the form of a 5% aqueous suspension.

10. The process according to claim 8 or 9, wherein the activated clay or acid clay has a specific surface area of 150-350 m^2/g.

11. The process according to any one of claims 1-10, which further includes the step of recovering by filtration the crystal that has precipitated by recrystallization.

12. The process according to any one of claims 1-11, wherein the filtrate formed in the step of recovery by filtration is recycled to the step of preparing the solution.

13. The process according to any one of claims 1-12, wherein the starting feed is either nearly 100% sesamin or a mixture of sesamin and episesamin at a sesamin to episesamin weight ratio between 99.9:0.1 and 40:60.

14. An apparatus for producing epimerized sesamin comprising an isomerizing unit having a mixing vessel for mixing an oil or fat containing sesamin or a sesamin-containing composition with an acidic catalyst to effect reaction, a crystallizing unit having a crystallizing vessel for performing recrystallization, and a fluid channel communicating the mixing vessel with the crystallizing vessel.

15. The apparatus for producing epimerized sesamin according to claim 14, wherein the fluid channel has a

filtering means.

16. The apparatus for producing epimerized sesamin according to claim 15, wherein the fluid channel consists of a reaction solution feed pipe for feeding the reaction solution from the mixing vessel to the filtering means and a filtrate feed pipe for forwarding the filtrate from the filtering means to the crystallizing vessel.

17. The apparatus for producing epimerized sesamin according to any one of claims 14-16, wherein the isomerizing unit has a means of heating the mixing vessel.

18. The apparatus for producing epimerized sesamin according to any one of claims 15-17, wherein the filtering means has a heating means.

19. The apparatus for producing epimerized sesamin according to any one of claims 15-17, wherein the filtering means has a pressurizing means.

20. The apparatus for producing epimerized sesamin according to any one of claims 15-19, wherein the crystallizing vessel has a cooling means.

CLAIMS

1. A process for producing an episesamin-rich composition having episesamin at a concentration greater than 50 wt% on the basis of the sum weight of sesamin and episesamin contained in the composition, comprising the steps of:

applying epimerization to sesamin or a sesamin-containing composition so that at least part of the sesamin is converted to episesamin; and

selectively crystallizing episesamin by recrystallization in an oil or fat.

2. The process according to claim 1, wherein the episesamin-rich composition is precipitated crystal and contains episesamin at a concentration 60 wt% and upward on the basis of the sum weight of sesamin and episesamin contained in the composition.

3. The process according to claim 1 or 2, wherein the episesamin-rich composition contains episesamin at a concentration 70 wt% and upward on the basis of the sum weight of sesamin and episesamin contained in the composition.

4. The process according to any one of claims 1-3, which further includes the step of dissolving the sesamin or sesamin-containing composition in an oil or fat under heating either prior to or after epimerization, thereby preparing a solution.

5. The process according to claim 4, wherein the oil or fat is at least one member selected from among MCT (middle-chain fatty acid triglyceride), diacyl glycerol, sesame salad oil, olive oil, soybean oil, rapeseed oil, corn oil, rice germ oil, and sunflower seed oil.

6. The process according to claim 5, wherein the oil or fat is MCT (middle-chain fatty acid triglyceride).

7. The process according to any one of claims 1-6, wherein the epimerization is an acidic catalyst treatment.

8. The process according to claim 7, wherein the acidic catalyst treatment consists of making contact with activated clay or acid clay.

9. The process according to claim 8, wherein the activated clay or acid clay is

one that has been adjusted to have a pH of 3.7 or less in the form of a 5% aqueous suspension.

10. The process according to claim 8 or 9, wherein the activated clay or acid clay has a specific surface area of 150-350 m^2/g.

11. The process according to any one of claims 1-10, which further includes the step of recovering by filtration the crystal that has precipitated by recrystallization.

12. The process according to any one of claims 1-11, wherein the filtrate formed in the step of recovery by filtration is recycled to the step of preparing the solution.

13. The process according to any one of claims 1-12, wherein the starting feed is either nearly 100% sesamin or a mixture of sesamin and episesamin at a sesamin to episesamin weight ratio between 99.9:0.1 and 40:60.

14. An apparatus for producing epimerized sesamin comprising an isomerizing unit having a mixing vessel for mixing an oil or fat containing sesamin or a sesamin-containing composition with an acidic catalyst to effect reaction, a crystallizing unit having a crystallizing vessel for performing recrystallization, and a fluid channel communicating the mixing vessel with the crystallizing vessel.

15. The apparatus for producing epimerized sesamin according to claim 14, wherein the fluid channel has a filtering means.

16. The apparatus for producing epimerized sesamin according to claim 15, wherein the fluid channel consists of a reaction solution feed pipe for feeding the reaction solution from the mixing vessel to the filtering means and a filtrate feed pipe for forwarding the filtrate from the filtering means to the crystallizing vessel.

17. The apparatus for producing epimerized sesamin according to any one of claims 14-16, wherein the isomerizing unit has a means of heating the mixing vessel.

18. The apparatus for producing epimerized sesamin according to any one of claims 15-17, wherein the filtering means has a heating means.

19. The apparatus for producing epimerized sesamin according to any one of claims 15-17, wherein the filtering means has a pressurizing means.

20. The apparatus for producing epimerized sesamin according to any one of claims 15-19, wherein the crystallizing vessel has a cooling means.